

DATE ISSUED: January 31, 2001

REPORT NO. 01-020

ATTENTION: Public Safety & Neighborhood Services Committee
Agenda of February 7, 2001

SUBJECT: Emergency Medical Services (EMS) Program
Priority 4 Level Dispatch

REFERENCE: City Manager Report 00-198

SUMMARY

Issue - Should the Public Safety and Neighborhood Services Committee approve a 90-day trial period to study Unscheduled, Non-Emergency Priority 4 calls with response times of 20 minutes 90% of the time for designated types of 9-1-1 calls as determined by the City EMS Medical Director?

Manager's Recommendation - Direct the City Manager to implement the trial period, and return to the Public Safety and Neighborhood Services Committee after 60 days with a status report of the findings and make recommendations for Priority Level 4 response time and criteria.

Other Recommendations - None

Fiscal Impact - None

BACKGROUND

In 1996, the City Council directed the redesign of the City's Emergency Medical Services (EMS) System. This redesign project resulted in a system which was configured to provide optimal EMS service to citizens while establishing fiscal viability of the system to ensure continued service. The EMS design envisioned partnering with managed care organizations as well as a four-level priority system of dispatch to maximize resources. At the onset of the current agreements with the EMS system provider, San Diego Medical Services Enterprise (SDMSE), efforts were concentrated on providing quality service for the 9-1-1 system. The procurement of

managed care contracts for non-emergency medical transportation were not fully initiated until Fiscal Year 2000. In addition, only two levels of priority dispatch were initially utilized in the 9-1-1 system as stipulated by the contracts.

The current EMS system design and the four agreements (LLC Agreement, EMS Agreement, City Agreement and Rural Agreement) with SDMSE identify four levels of dispatch priority responses. Response Priorities 1 and 3 were implemented at the start of the contracts on July 1, 1997 providing a Code response (lights and siren use while driving) for ambulance and engine for Priority 1 and a no-Code ambulance only response for Priority 3. The City EMS Medical Director was directed by the Public Safety and Neighborhood Services (PS&NS) Committee on May 5, 1999 to develop additional priority guidelines for ultimate implementation of all four levels of EMS dispatch envisioned in the EMS system design and subsequent Agreements. Response Priority 2 was implemented on July 1, 1999, providing a Code ambulance response with the engine available upon request by the responding paramedic.

The current EMS Agreements set the following response criteria by a transport ambulance:

Priority 1 - Life threatening emergency: Response of a paramedic ambulance on the scene within 12 minutes and zero seconds not less than 90% of the time in each of the four zones (First Responder is also dispatched to these calls)

Priority 2 - Non-life threatening emergency: Response of a paramedic ambulance on the scene within 12 minutes and zero seconds not less than 90% of the time in each of the four zones (First Responder is dispatched to these calls if requested by ambulance paramedic)

Priority 3 - Urgent requests: Response of a paramedic or other ambulance on the scene within 15 minutes and zero seconds not less than 90% of the time in each of the four zones

Priority 4 - Unscheduled Non-emergency requests: Response of an ambulance on the scene within 15 minutes and zero seconds not less than 90% of the time in each of the four zones

DISCUSSION

The types of calls determined by the City EMS Medical Director, Dr. James Dunford, to be included in Priority Level 4 require the medical care appropriate to Emergency Medical Technicians (EMTs) and a Basic Life Support (BLS) ambulance, rather than a paramedic-staffed ALS ambulance. The types of calls included in this response level would include approximately four percent (4%) of the current 9-1-1 medical call volume. The evaluation process also incorporated recommendations of the Dispatch Advisory Task Force. This Task Force included dispatchers, paramedics, Battalion Chiefs, the Emergency Medical Dispatch (EMD) Quality Improvement Specialist and the Communications Manager. This group evaluated 9-1-1 medical response data and assisted the Medical Director with establishment of the types of calls which would be included into Priority 4 dispatch.

This level of response includes those calls which are “Unscheduled, Non-emergency Requests.” The types of calls included in this response priority level are animal bites, sunburn, psychiatric problems and “sick person” which includes everything from boils to

toothaches. A complete listing of the types of calls is included as Attachment 1 to this report.

The City of San Diego system has tracked the level of acuity of patients transported to hospitals for many years, as a result, Dr. Dunford was able to further evaluate the probability of a person's level of actual acuity for responses to the types of calls he identified as appropriate for Priority 4. The transportation codes used in the EMS system to designate the level of care during transport to the hospital are as follows:

- Code 10 - Acute status patient. Transport to hospital in Code-3 status, with multiple ALS skills and treatment provided.
- Code 20 - Moderate status patient. Transport to the hospital in No Code status, with IV, oxygen, or medications given. ALS treatment provided.
- Code 30 - Mild status patient. Transport to the hospital in No Code status, with IV indicated, BLS treatment provided.
- Code 40 - Stable status patient. Transport to the hospital in No Code status, with only BLS treatment provided.
- Code 50 - Very stable patient. Transportation to the hospital only provided - no medical intervention required. Other transport method could have more appropriately been used (e.g. private vehicle, taxi, etc.)

The analysis completed on call types identified for Priority 4 level calls includes a review of the above transportation codes as well as the chief complaint identified by the call takers at the 9-1-1 dispatch center. There have been 12,182 responses to these types of calls during the first three years of operation by SDMSE. Of those responses, 7,977 (65.5%) resulted in transportation to the hospital, the remainder of the responses (4,201 or 34.5%) refused care or the paramedics were unable to locate a patient upon arrival at the address. Of the call types identified, 67.9% were ultimately transported to the hospital as a Code 40 or 50, 26.1% were transported Code 30 and only 6.0% were transported Code 10 or 20. These Priority 4 calls could go to any provider of Basic Life Support (BLS) medical transportation, however, the caller accesses 9-1-1 instead of calling any one of several BLS companies which could provide this level of transportation services.

City Manager's Report 00-198, presented at PS&NS Committee on October 4, 2000 and at City Council on December 11, 2000 previously recommended a response time of 25 minutes 90% of the time. Since those hearings, additional discussions have occurred between City staff, the managers of SDMSE, Fire Fighters Local 145 and Dr. Dunford. An agreement was reached to conduct further study through a 90-day trial period with the recommended response time of 20 minutes, rather than 25 minutes, 90% of the time, prior to making a final recommendation for the contract change.

An analysis of this study, including the revised response time and types of calls allocated to Priority 4 dispatch level will be conducted, and findings will be returned to PS&NS after the full implementation of Priority 4 level. The report will include the impacts on the 9-1-1 system through this modified response level. It is anticipated that this will occur in late April of this year.

The goal of the City's 9-1-1 system is to insure the highest level of medical care and medical transportation services to the citizens of the San Diego in a fiscally efficient manner. The use of resources appropriate to the need of the patient is critical to the viability of the

current EMS system. The change in Priority 4 response time would enable SDMSE to more effectively meet the non-emergency transportation needs of callers accessing the 9-1-1 system for their general transportation needs and increase the availability of ALS ambulances for life-threatening calls. The recommended change of response time criteria for Priority Level 4 dispatches (from 15 minutes to 20 minutes) would allow the City's provider, SDMSE, to maintain the highest level of service while utilizing BLS ambulances to respond to the 9-1-1 calls for Priority Level 4 calls.

In comparison, the response time used by SDMSE for their non-emergency BLS Division for calls received at the seven-digit dispatch (versus 9-1-1 dispatch) for calls that are considered *Unscheduled, Non-Emergency* is 30 to 60 minutes, depending on the *Managed Care Organization* contractor. During this study, two additional BLS units will be added, and if there are no BLS units available to respond to a Priority Level 4 call which is received via 9-1-1, an ALS ambulance will be dispatched to ensure a timely arrival. The City EMS Medical Director, Dr. Dunford, will continue to monitor these calls to ensure appropriate resources for the need of the patient are dispatched and make changes as deemed necessary.

SUMMARY

The implementation of Dispatch Priority 4 was envisioned during the design of the EMS system in 1995. The types of calls included in this recommendation have been developed through the evaluation of three years of data, input and discussion with system participants and the clinical knowledge of the City's Medical Director. The types of calls designated to each of the four dispatch priorities is a continually evolving science determined through data analysis, clinical education and changes in the practice of paramedicine. The Medical Director will continue to evaluate the City's EMS system dispatch priorities and make adjustments where clinical quality designates.

By providing authorization for the amended response time during the trial period, the ability to designate the dispatch of BLS ambulances to these types of calls, through the extension of response time to 20 minutes 90% of the time, will only improve the availability of ALS paramedic ambulances for truly life threatening 9-1-1 calls.

ALTERNATIVES:

1. Do not accept the recommendation of the City Manager to direct the EMS Medical Director to implement a 90-day trial period to study *Unscheduled, Non-Emergency Priority 4* calls with response times of 20 minutes 90% of the time for designated types of 9-1-1 calls.

This is not recommended because fiscal viability of the EMS system requires appropriate resource allocation and this study will enable the managers of the EMS system and the medical director to make appropriate resource allocations to ensure quality medical care to the citizens and visitors of San Diego.

Respectfully submitted,

Patricia H. Nuñez

Approved:
Patricia T.
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EMS Program Manager
Emergency Medical Services Program

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Attachments: 1.Spreadsheet of Priority 4 Level Responses and Outcomes

**PROPOSED LEVEL 4 DISPATCH
DETERMINANT CODE TYPE
FISCAL YEAR 2001**

01	DESCRIPTION	#RUS	#TRANS	%	10	%10	20	%20	30	%30	40	%40	50	%50
4	ANIMAL BITE (SUPERFICIAL)	214	89	42%	0	0.0%	2	0.0%	5	2.3%	50	23.4%	32	15.0%
4	ANIMAL BITE (SPIDER/INSECT)	71	34	48%	1	1.4%	1	1.4%	9	12.7%	11	15.5%	12	16.9%
4	ASSAULT/RAPE (NON RECENT >6 HRS)	134	78	58%	3	2.2%	1	2.2%	15	11.2%	31	23.1%	28	20.9%
4	BACK PAIN (TRAUMATIC, > 6HRS.)	265	217	82%	0	0.0%	5	0.0%	31	11.7%	99	37.4%	82	30.9%
4	BURNS (SUNBURN OR MINOR)	86	44	51%	5	5.8%	6	5.8%	4	4.7%	18	20.9%	11	12.8%
4	EYE PROBLEMS (MINOR)	151	82	54%	1	0.7%	1	0.7%	8	5.3%	31	20.5%	42	27.8%
4	PSYCH/BEHAV (NON VIOLENT+ NONSUICIDAL)	1051	534	51%	7	0.7%	9	0.7%	66	6.3%	143	13.6%	309	29.4%
4	SICK PERSON (NO PRIORITY SX)	4200	2910	69%	44	1.0%	154	1.0%	977	23.3%	929	22.1%	808	19.2%
4	SICK PERSON (BOILS)	34	20	59%	0	0.0%	0	0.0%	3	8.8%	8	23.5%	9	26.5%
4	SICK PERSON (BUMPS)	12	8	67%	0	0.0%	0	0.0%	1	8.3%	5	41.7%	2	16.7%
4	SICK PERSON (CAN'T SLEEP)	66	37	56%	0	0.0%	4	0.0%	5	7.6%	15	22.7%	13	19.7%
4	SICK PERSON (CAN'T URINATE)	103	78	76%	2	1.9%	4	1.9%	26	25.2%	22	21.4%	24	23.3%
4	SICK PERSON (CATHETER)	81	58	72%	1	1.2%	2	1.2%	5	6.2%	32	39.5%	18	22.2%
4	SICK PERSON (CONSTIPATION)	108	76	70%	2	1.9%	3	1.9%	18	16.7%	29	26.9%	24	22.2%
4	SICK PERSON (CRAMPS/SPASMS)	196	136	69%	1	0.5%	4	0.5%	36	18.4%	56	28.6%	39	19.9%
4	SICK PERSON (REMOVE RING)	5	0	0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4	SICK PERSON (DEAFNESS)	0	0	0%	0	0.0%	0	0.0%	0	0.0%	0	0%	0	0%
4	SICK PERSON (DEFECATION)	49	39	80%	1	2.0%	0	2.0%	23	46.9%	8	16.3%	7	14.3%
4	SICK PERSON (EARACHE)	69	37	54%	1	1.4%	1	1.4%	0	0.0%	11	15.9%	24	34.8%
4	SICK PERSON (ENEMA)	7	4	57%	0	0.0%	0	0.0%	0	0.0%	3	42.9%	1	14.3%
4	SICK PERSON (GOUT)	5	4	80%	0	0.0%	0	0.0%	0	0.0%	2	40.0%	2	40.0%
4	SICK PERSON (HEMORRHOIDS)	18	12	67%	0	0.0%	0	0.0%	0	0.0%	2	11.1%	10	55.6%
4	SICK PERSON (HEPATITIS)	12	6	50%	0	0.0%	0	0.0%	1	8.3%	2	16.7%	3	25.0%
4	SICK PERSON (HICCUPS)	4	4	100%	0	0.0%	0	0.0%	0	0.0%	4	100.0%	0	0.0%
4	SICK PERSON (HUNGRY)	8	5	63%	0	0.0%	1	0.0%	4	50.0%	0	0.0%	0	0.0%
4	SICK PERSON (NERVOUS)	75	37	49%	1	1.3%	1	1.3%	9	12.0%	10	13.3%	16	21.3%
4	SICK PERSON (OBJ STUCK EAR, NOSE, ETC)	75	34	45%	0	0.0%	0	0.0%	3	4.0%	9	12.0%	22	29.3%
4	SICK PERSON (OBJ SWALLOWED, NO CHOKING)	35	14	40%	0	0.0%	1	0.0%	0	0.0%	5	14.3%	8	22.9%

4	SICK PERSON (PENIS PROBLEMS)	37	27	73%	0	0.0%	1	0.0%	7	18.9%	7	18.9%	12	32.4%
4	SICK PERSON (RASH, SKIN PROBS)	59	37	63%	0	0.0%	3	0.0%	7	11.9%	12	20.3%	15	25.4%
4	SICK PERSON (SORE THROAT)	37	23	62%	1	2.7%	2	2.7%	1	2.7%	5	13.5%	14	37.8%
4	SICK PERSON (TOOTHACHE)	56	28	50%	0	0.0%	0	0.0%	1	1.8%	6	10.7%	21	37.5%
4	SICK PERSON (TRANSPORT ONLY)	4093	2718	66%	48	1.2%	129	1.2%	729	17.8%	841	20.5%	972	23.7%
4	SICK PERSON (VENEREAL DISEASE)	41		25%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	25.0%
4	SICK PERSON (WOUND INFECTED)	124	82	66%	0	0.0%	0	0.0%	13	10.5%	29	23.4%	40	32.3%
4	GSW/STAB (> 6 HRS, SINGLE PERIPHERAL)	16	7	44%	0	0.0%	0	0.0%	2	12.5%	3	18.8%	2	12.5%
4	TRAFF ACC (1ST PARTY CALLER, - DANGER)	40	20	50%	2	5.0%	0	5.0%	2	5.0%	11	27.5%	5	12.5%
4	TRAUMA INJ (NON-RECENT > 6HRS)	582	437	75%	21	3.6%	9	3.6%	75	12.9%	180	30.9%	152	26.1%
	TOTALS	1218	7977	65%	142	1.2%	344	1.2%	2086	17.1%	2629	21.6%	2780	22.8%
		2												
	% of Actual Transports					1.8%		4.3%		26.2%		33.0%		34.9%